



DUAL INDUCTION LOG

Company DARRAH OIL COMPANY, LLC.

Well CHURCH #1-14

Field UNNAMED

County BUTLER State KANSAS

Location: API #: 15-015-24175-0000

356' FNL & 1500' FEL

SEC 14 TWP 23S RGE 5E

Permanent Datum GROUND LEVEL Elevation 1509
Log Measured From KELLY BUSHING 8' A.G.L
Drilling Measured From KELLY BUSHING

Other Services
CDL/CNL/PE
MEL/SON

Elevation

K.B. 1517
D.F. 1515
G.L. 1509

Date	5/20/23
Run Number	ONE
Depth Driller	2282
Depth Logger	2282
Bottom Logged Interval	2280
Top Log Interval	00
Casing Driller	8 5/8" @ 221
Casing Logger	221
Bit Size	7 7/8
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.5/40
pH / Fluid Loss	10.0/9.6
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.80 @ 64F
Rmf @ Meas. Temp	1.35 @ 64F
Rmc @ Meas. Temp	2.16 @ 64F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	1.14 @ 101F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	4:30 A.M.
Maximum Recorded Temperature	101F
Equipment Number	8916
Location	HAYS, KANSAS
Recorded By	COLE ROBBEN
Witnessed By	ROGER MARTIN

<<< Fold Here >>>

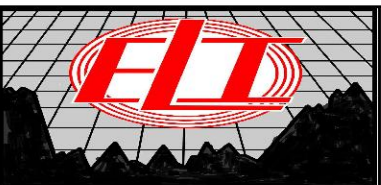
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395

DIRECTIONS:

FROM MARION, KANSAS GO SOUTH ON US-77 FOR 14 MILES TO NW 160TH STREET,
EAST ON NW 160TH STREET FOR 3/4 MILE, SOUTH INTO

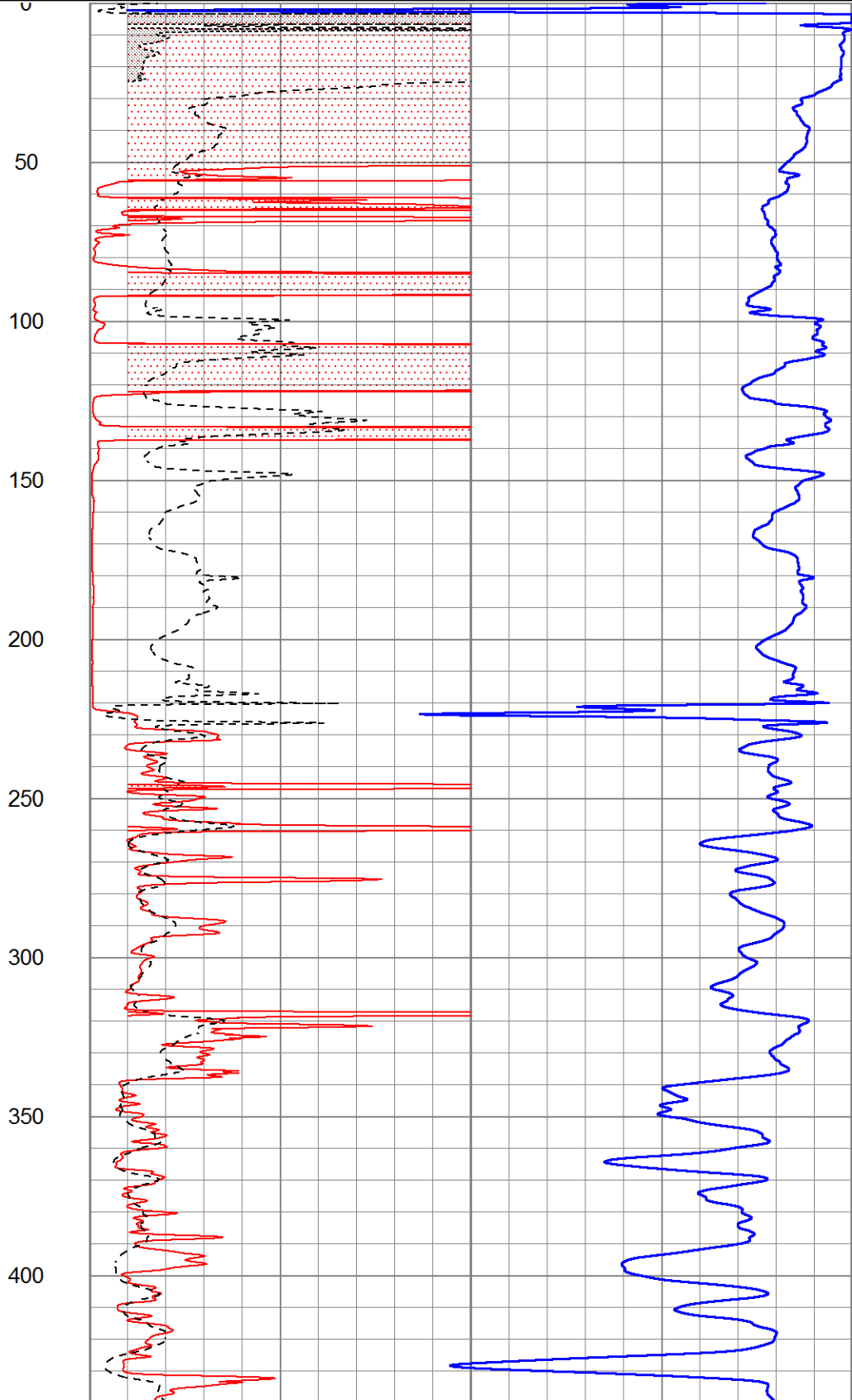
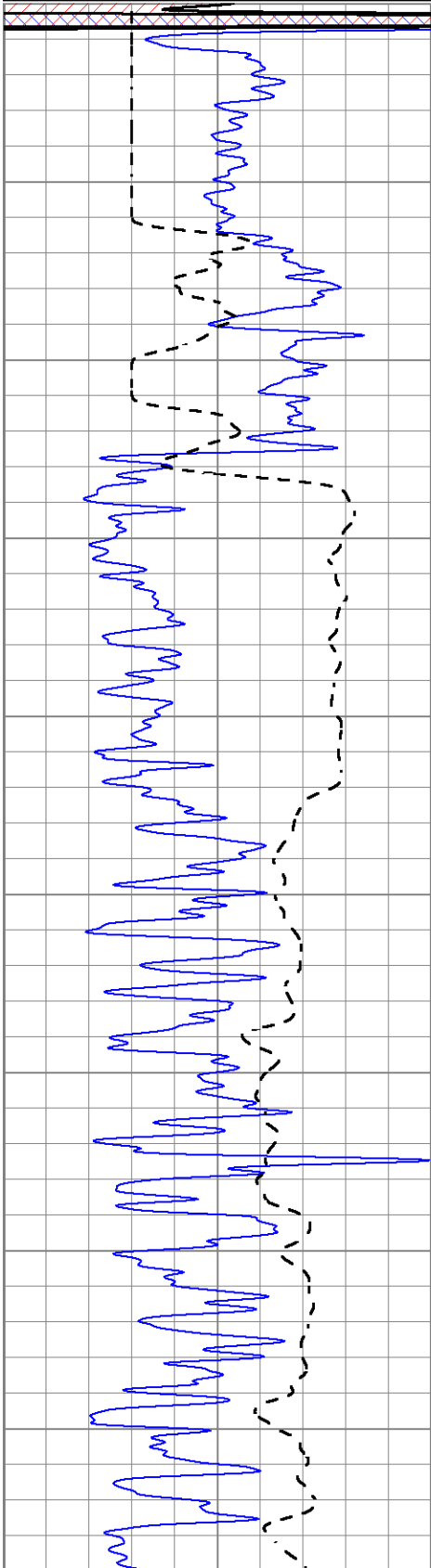


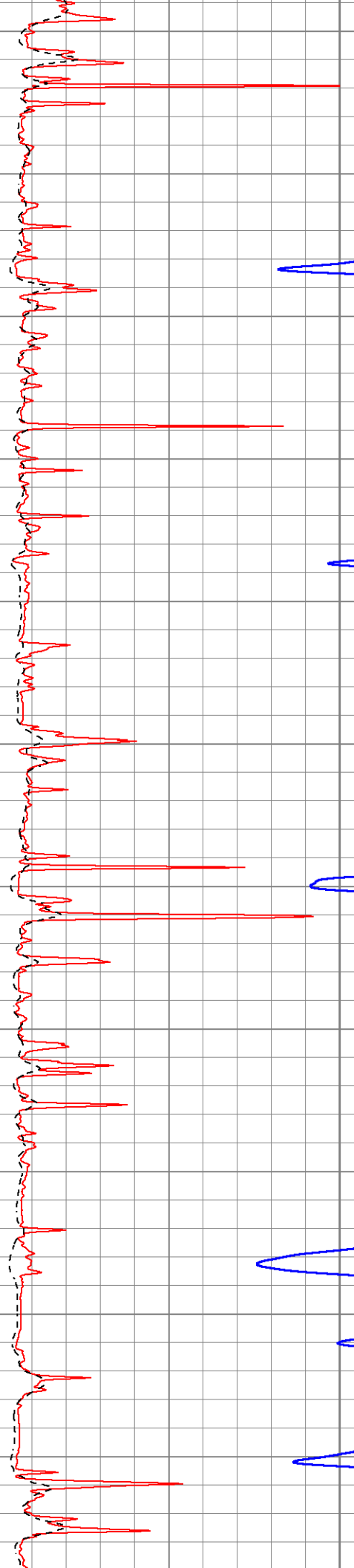
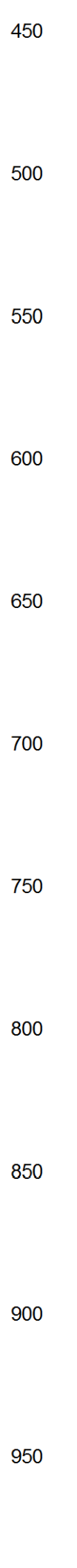
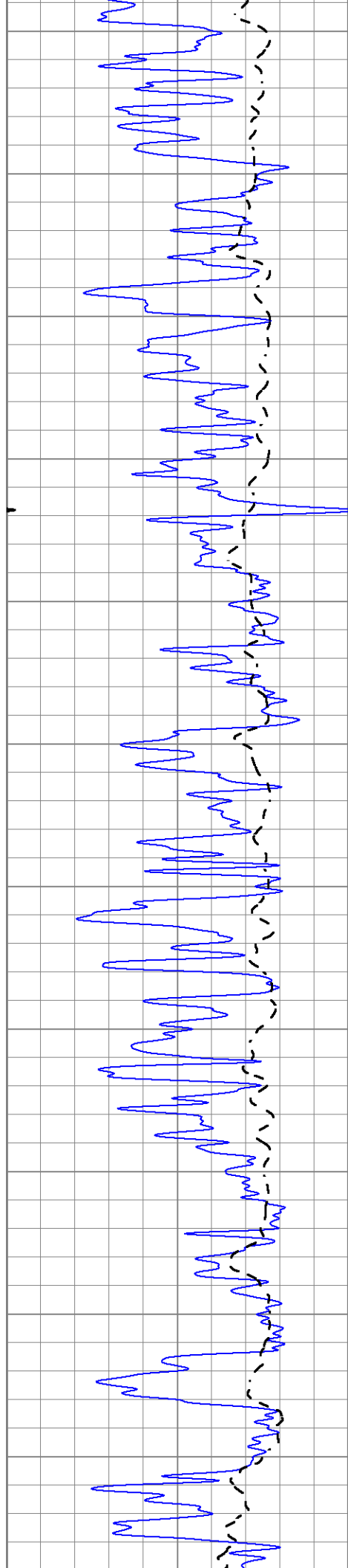
MAIN SECTION

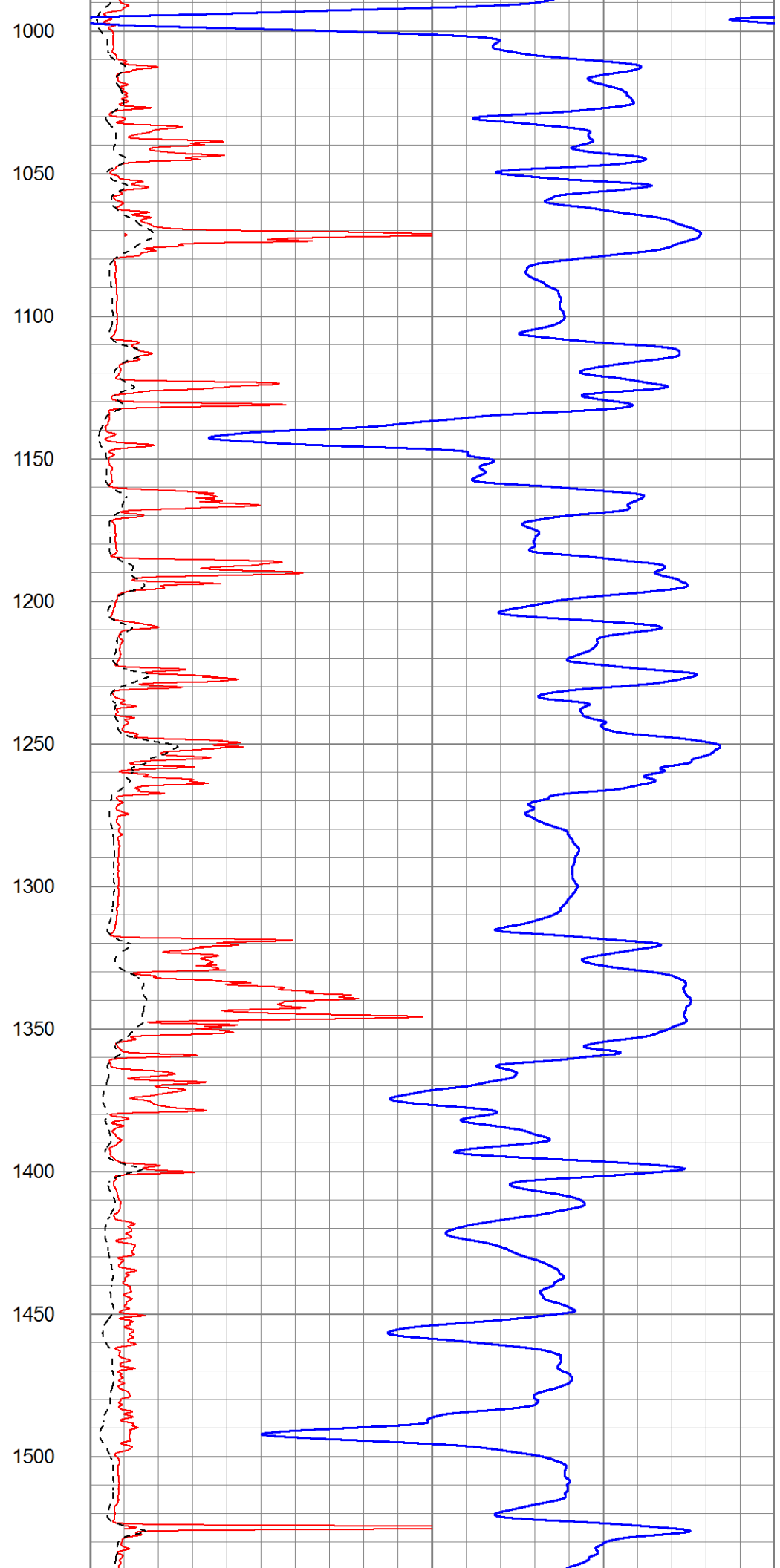
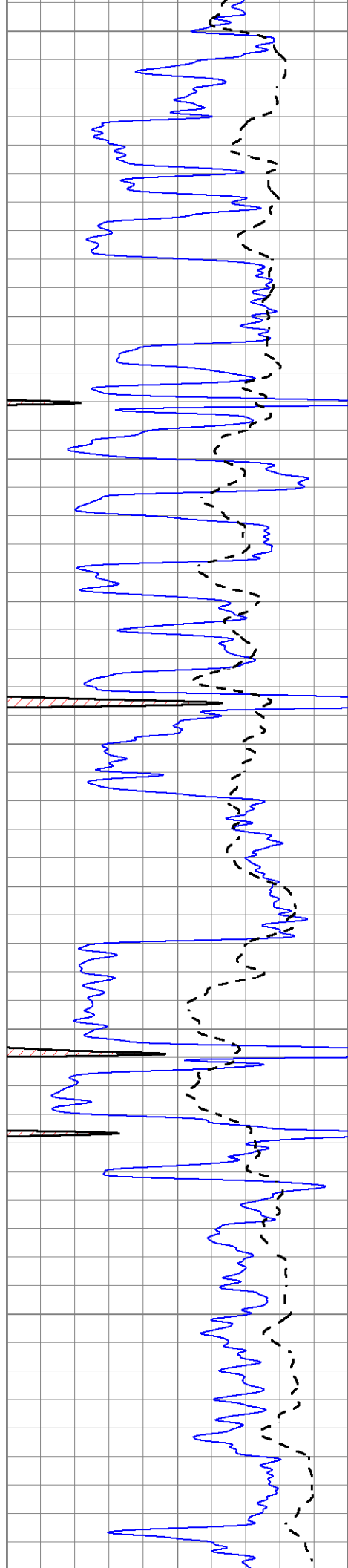
Database File 7587pe.db
 Dataset Pathname pass5DIL
 Presentation Format _dil2
 Dataset Creation Sat May 20 07:56:44 2023
 Charted by Depth in Feet scaled 1:600

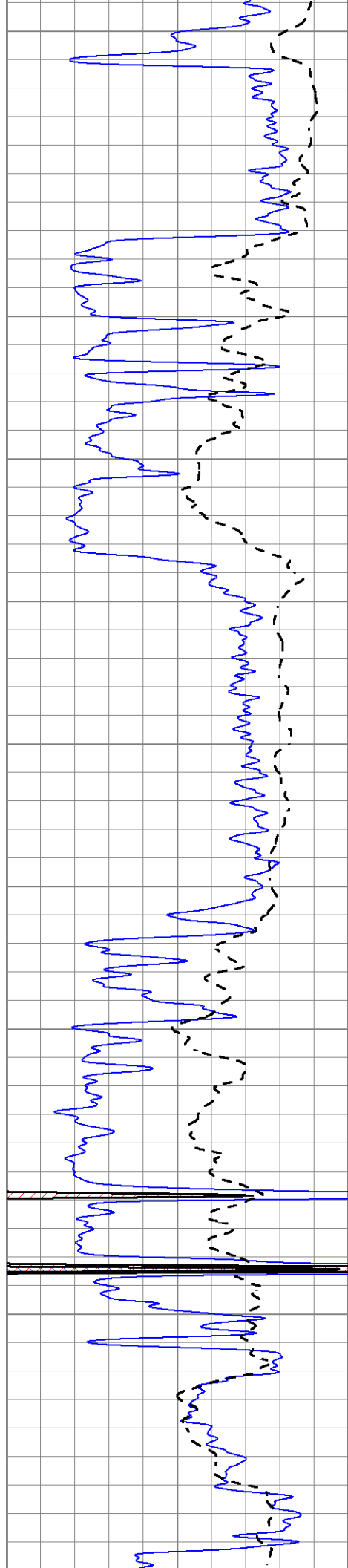
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

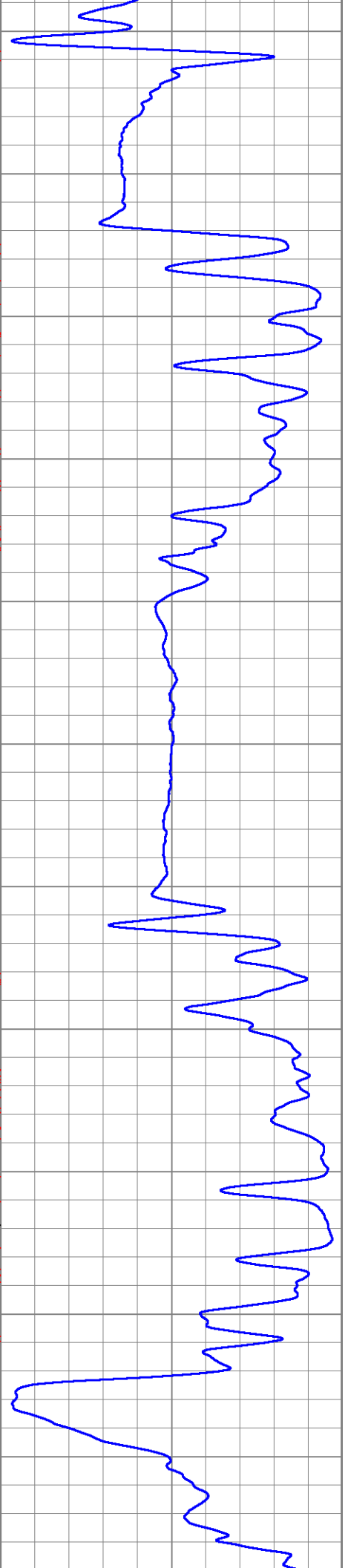
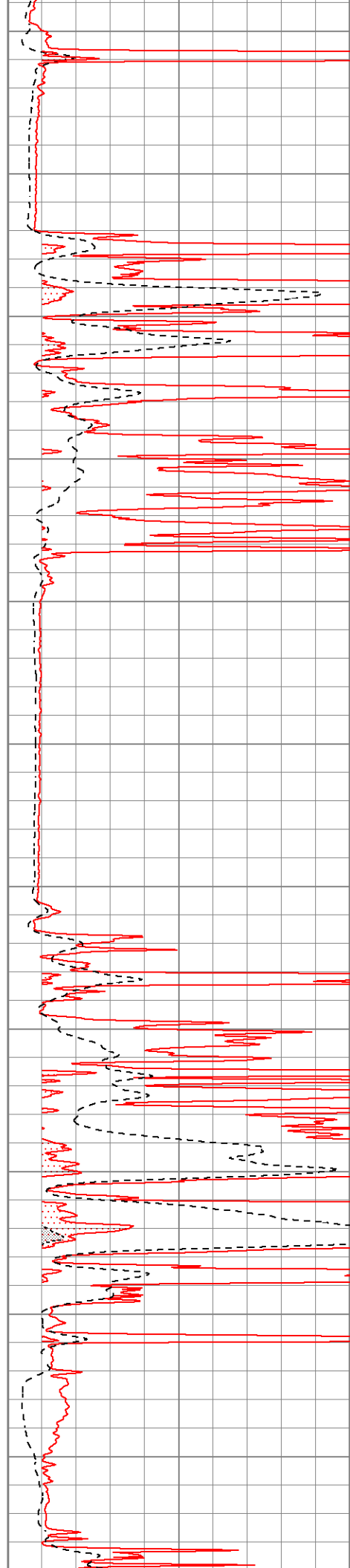


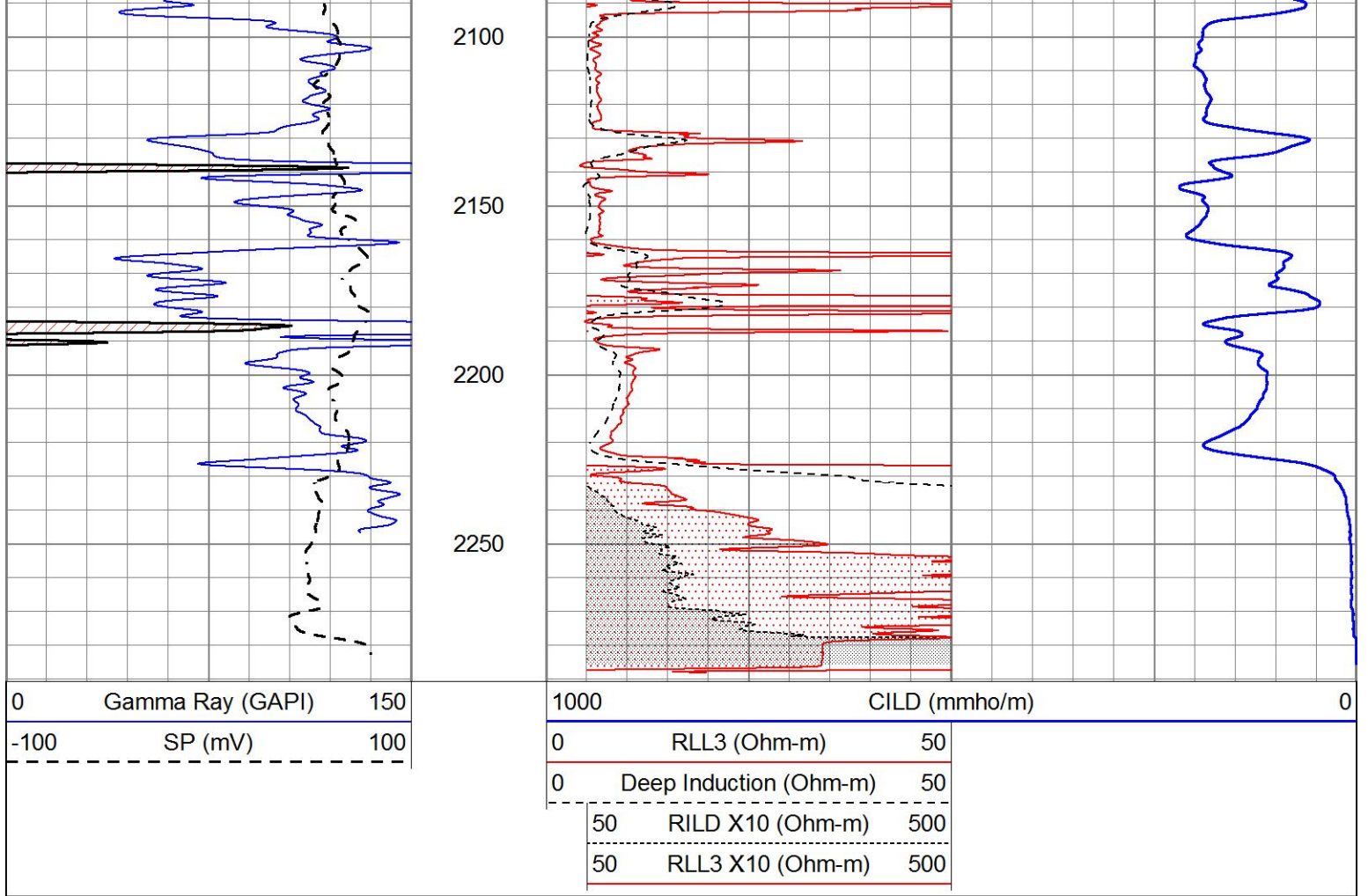






1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050



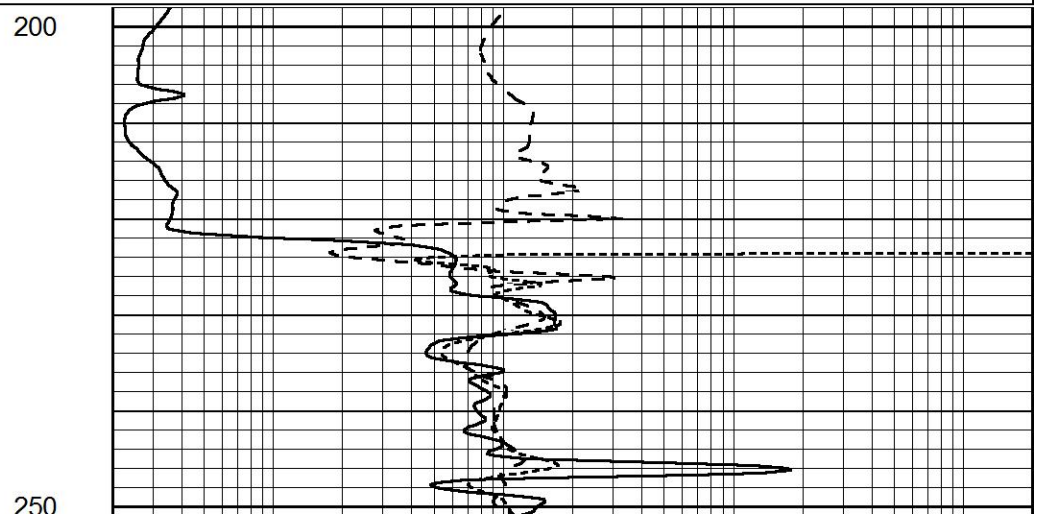
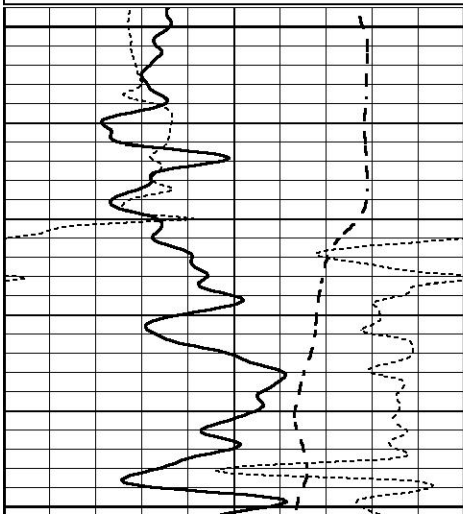


MAIN SECTION

Database File 7587pe.db
 Dataset Pathname pass5DIL
 Presentation Format _dil
 Dataset Creation Sat May 20 07:56:44 2023
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



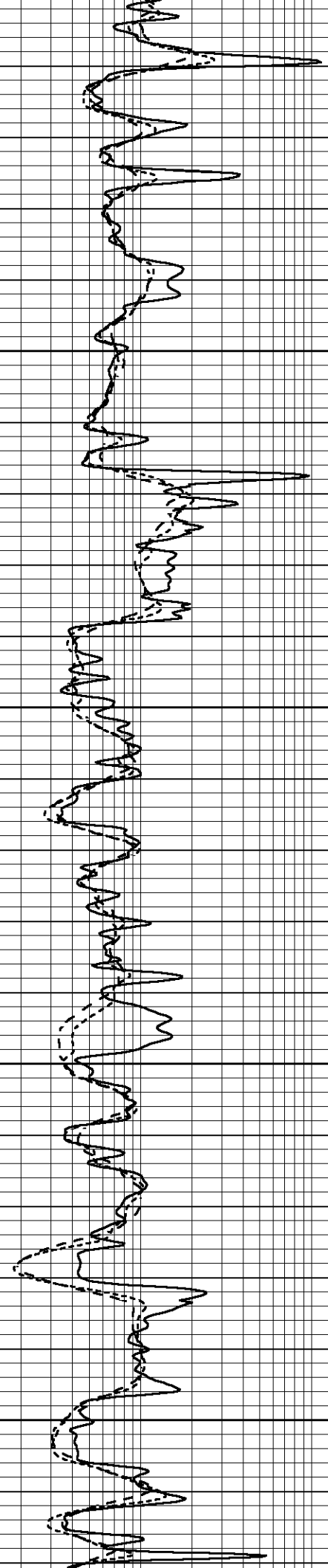
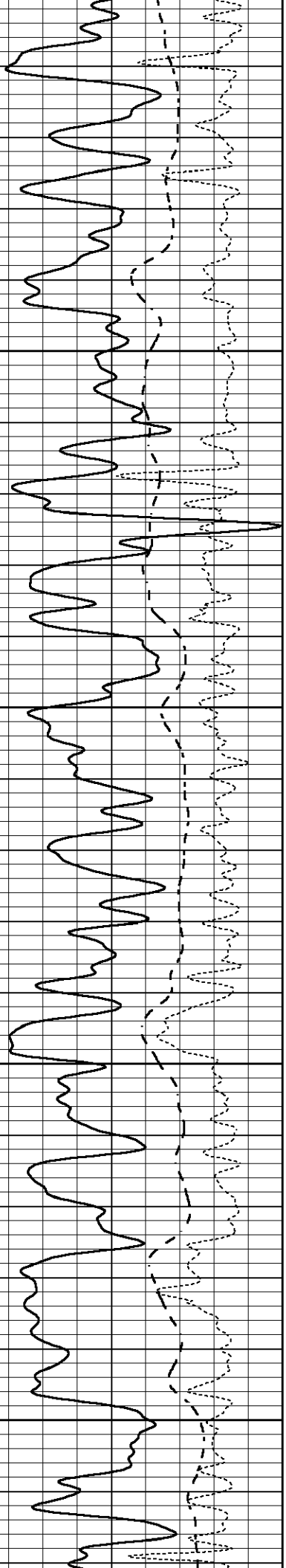
100

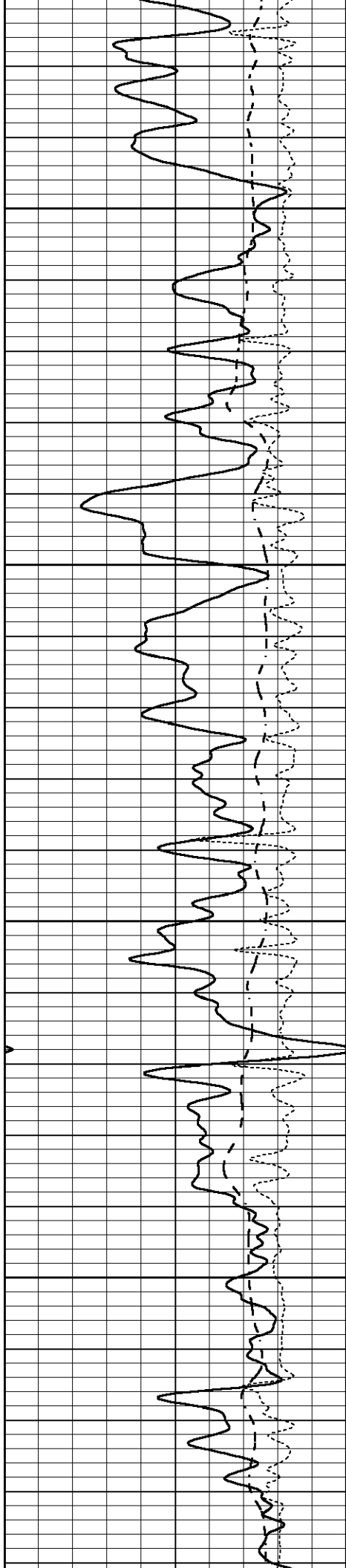
300

350

400

450



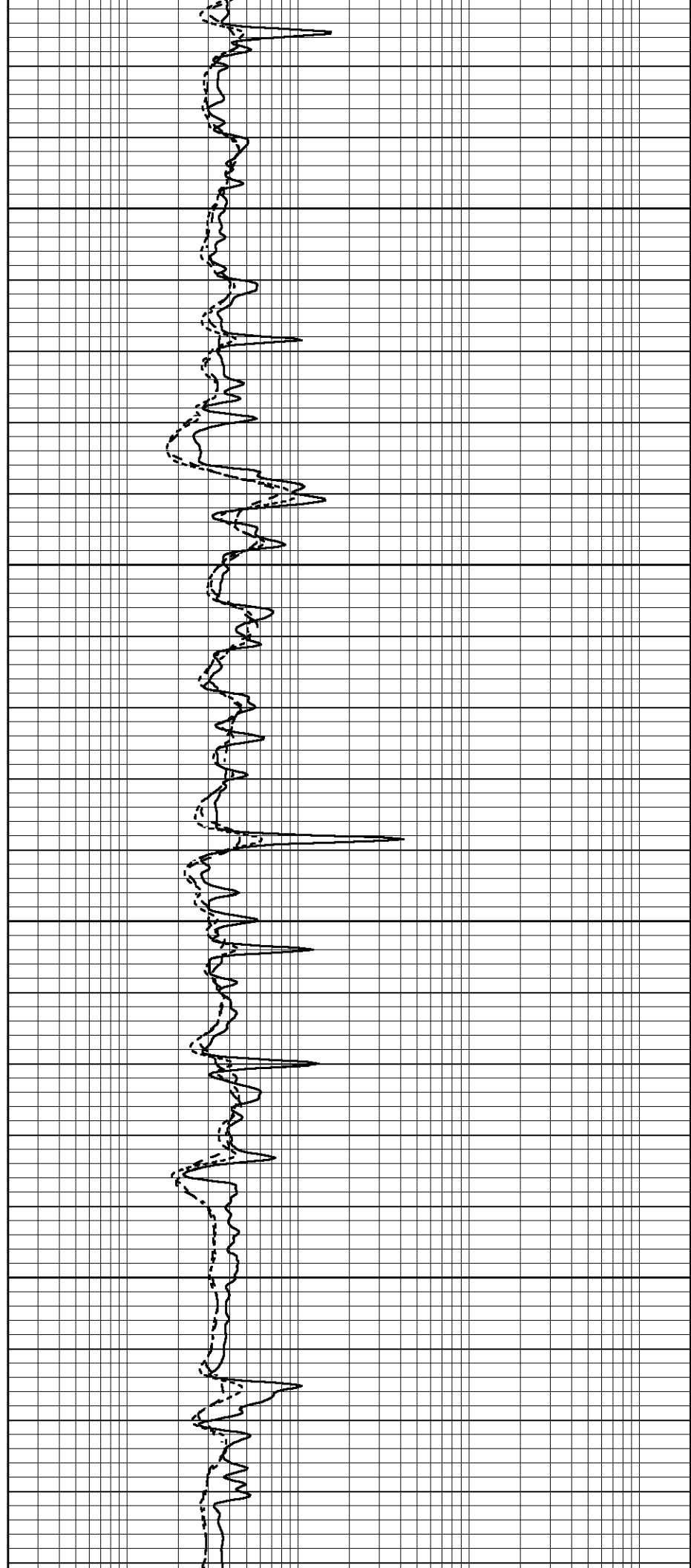


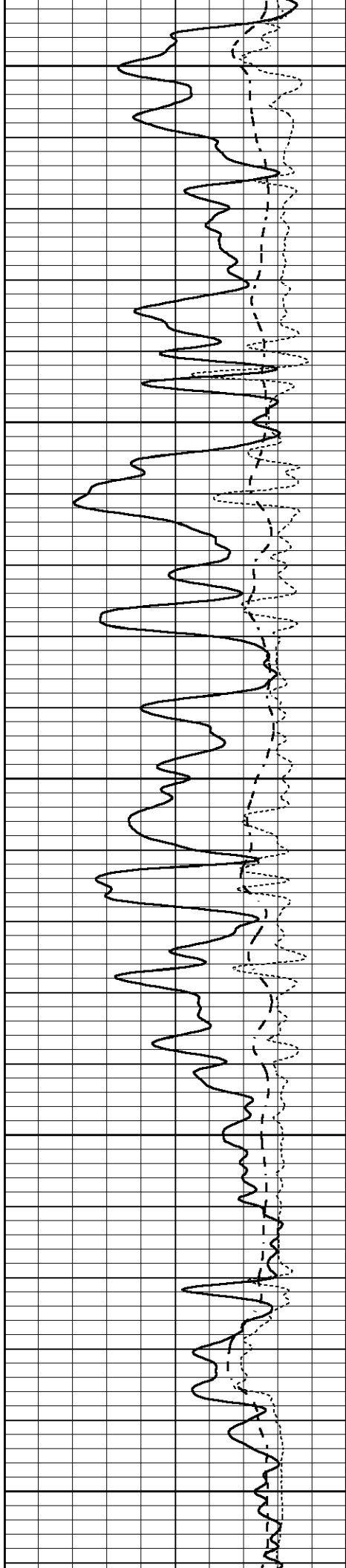
500

550

600

650





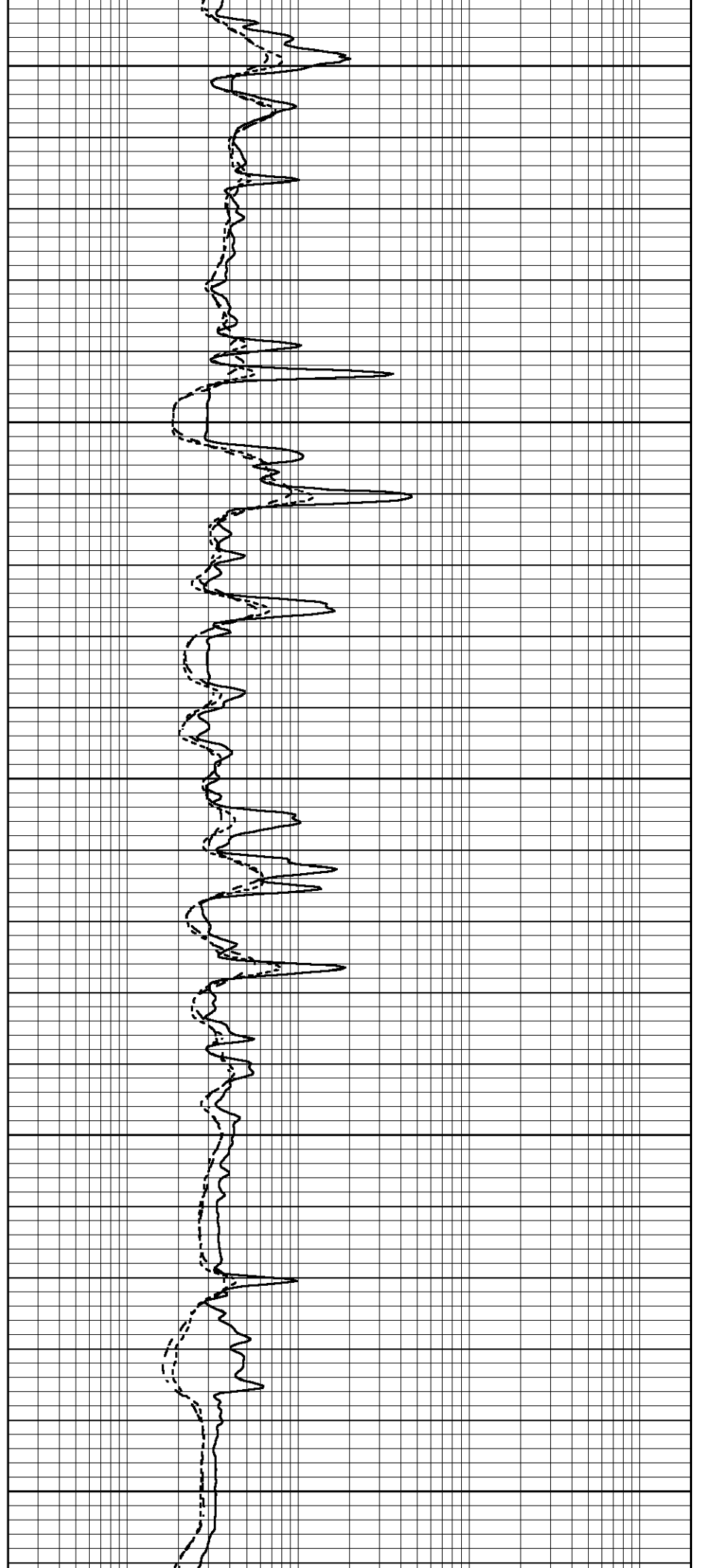
700

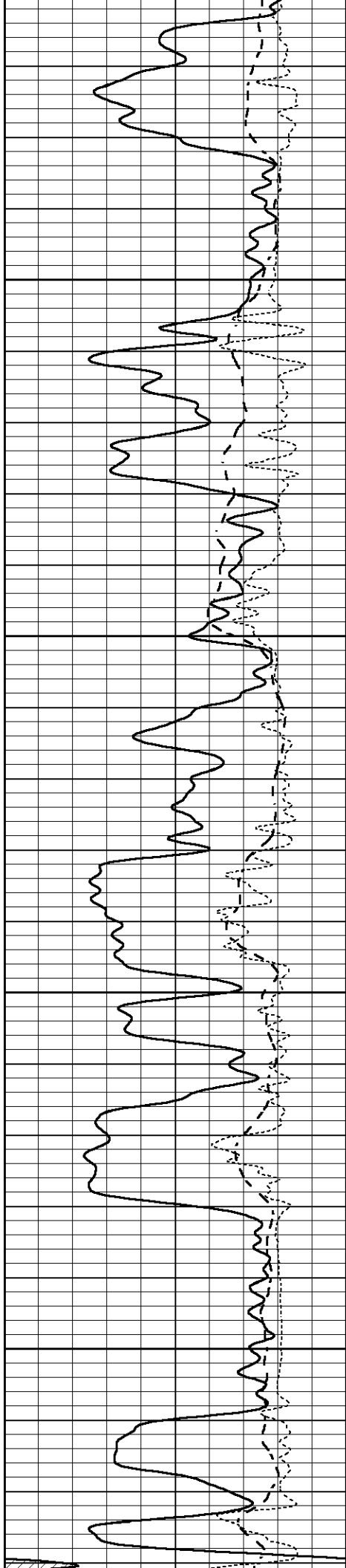
750

800

850

900



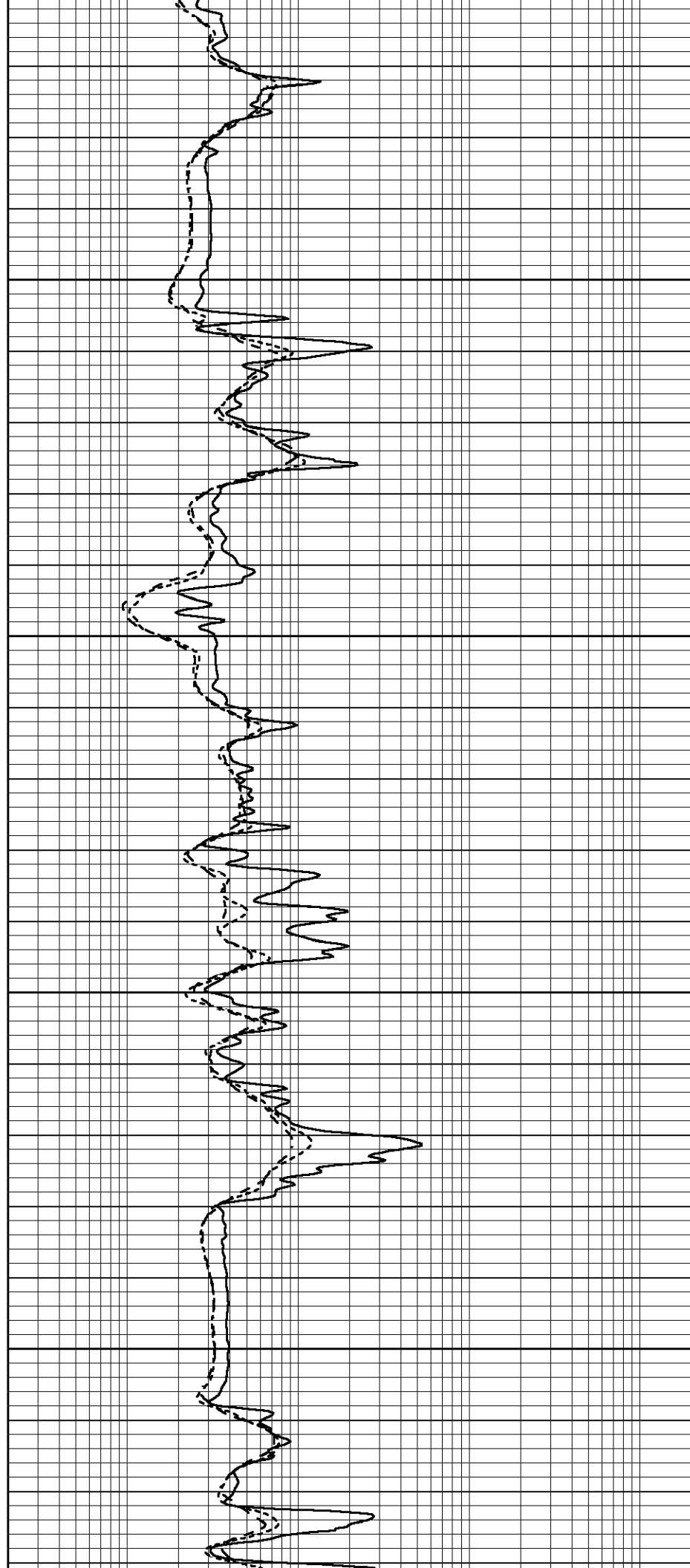


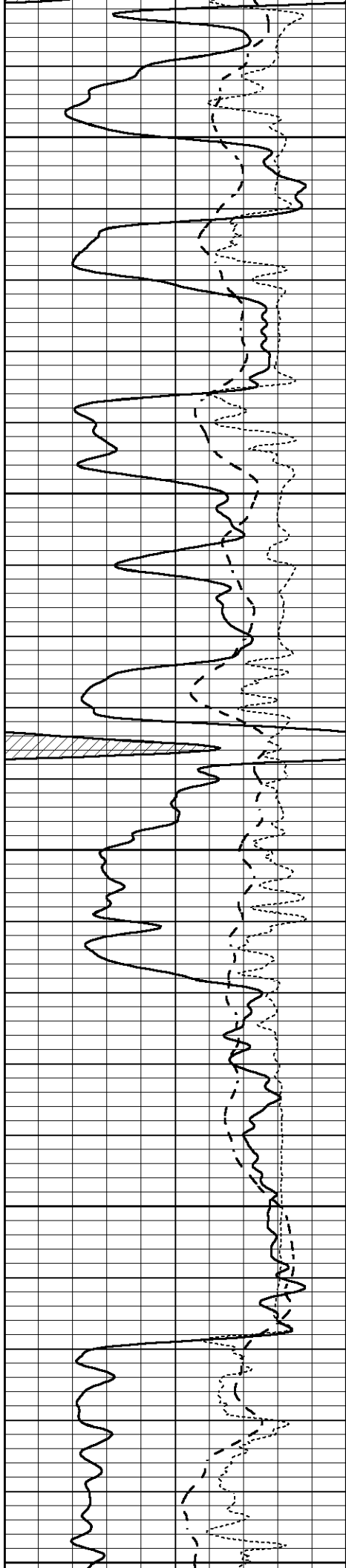
950

1000

1050

1100





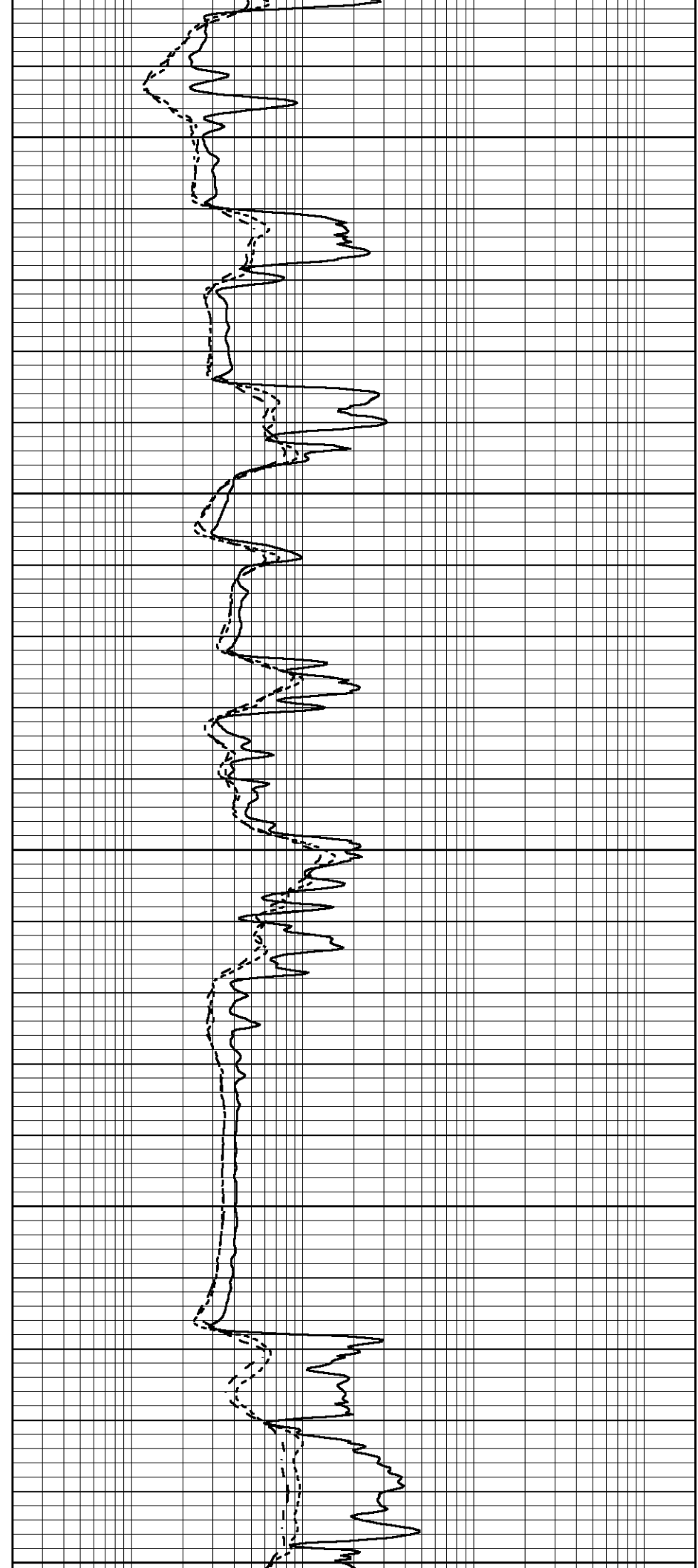
1150

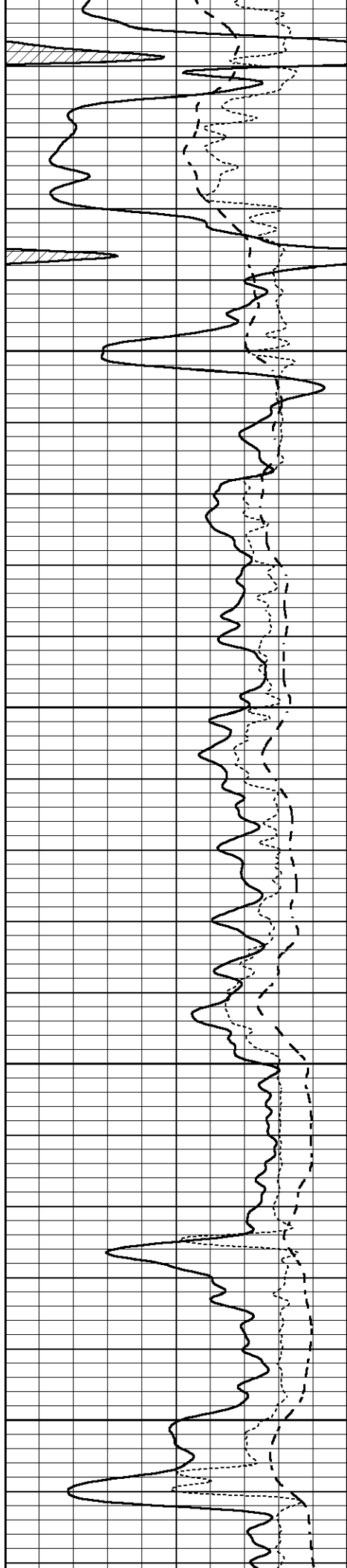
1200

1250

1300

1350





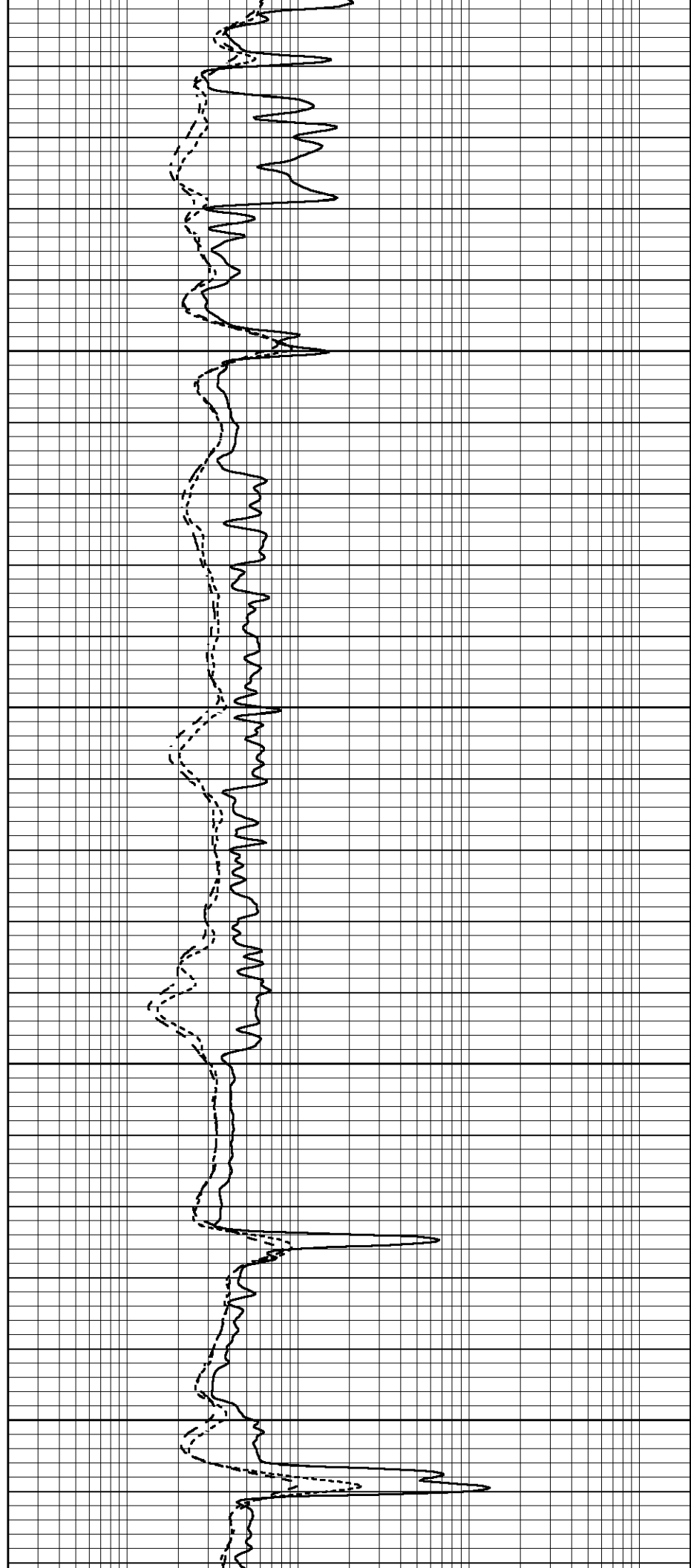
1350

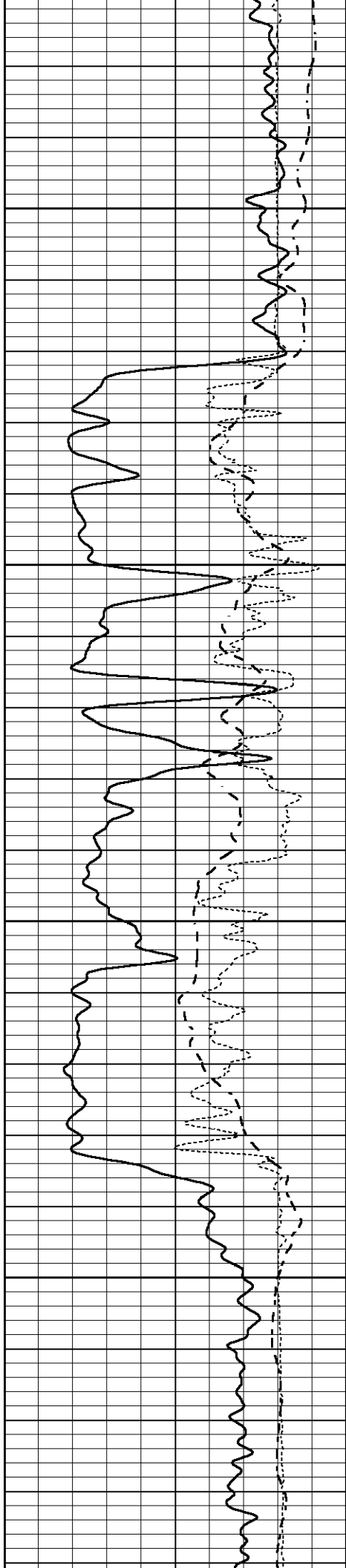
1400

1450

1500

1550



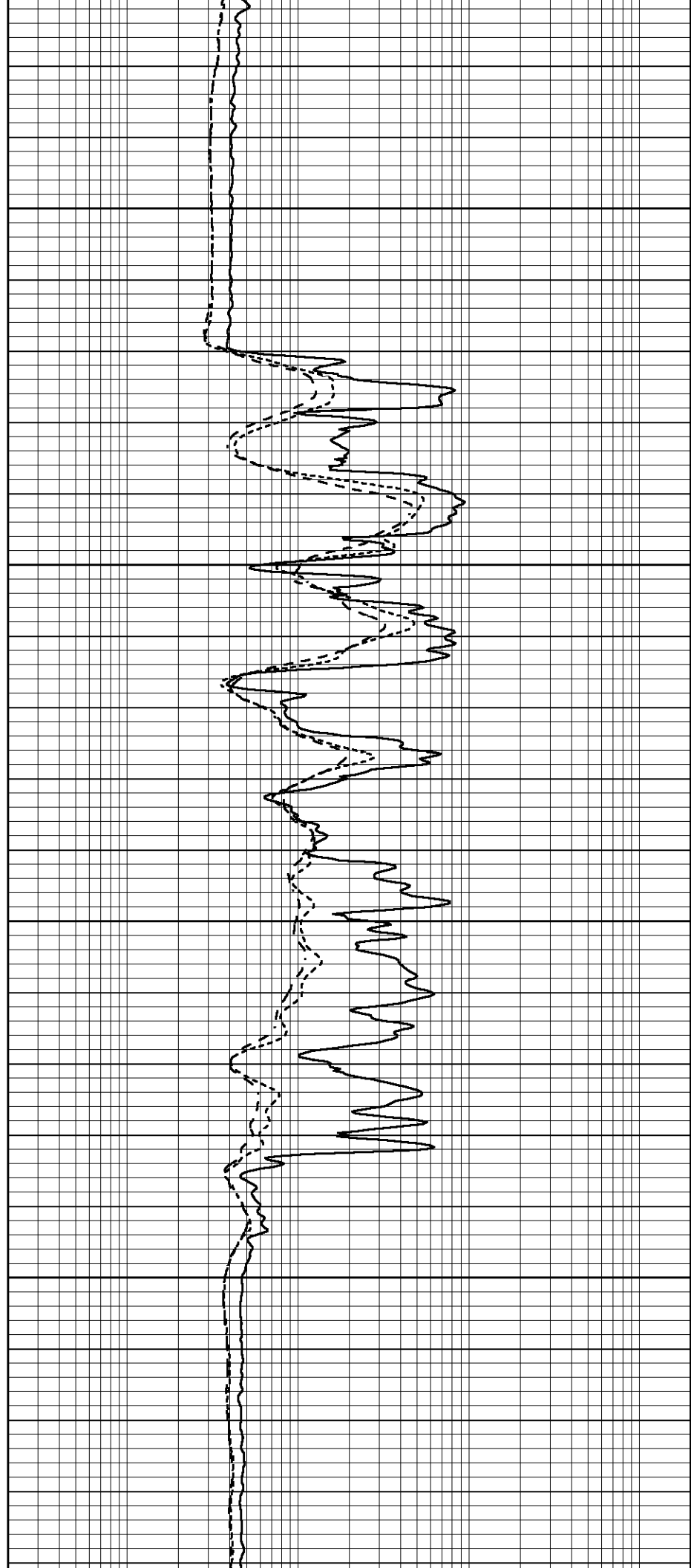


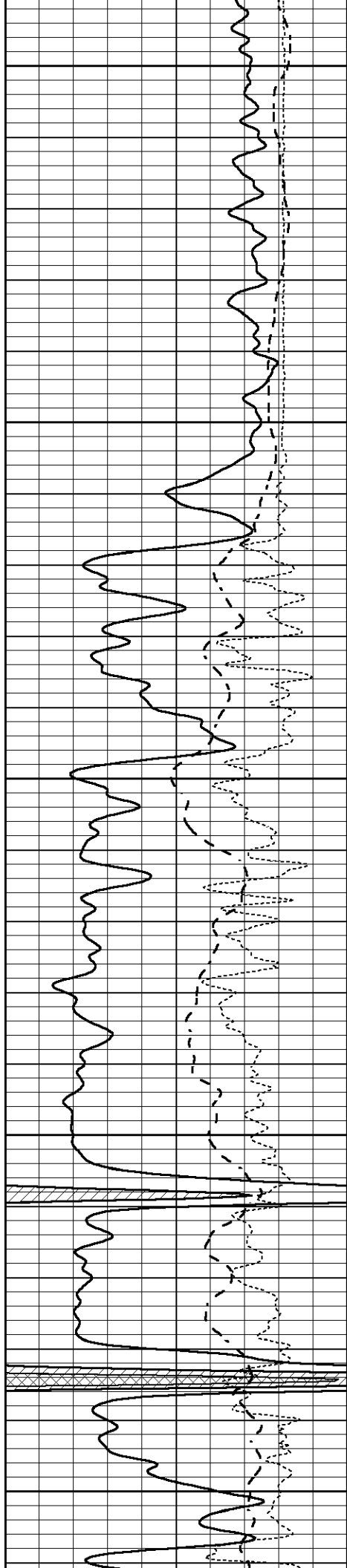
1600

1650

1700

1750





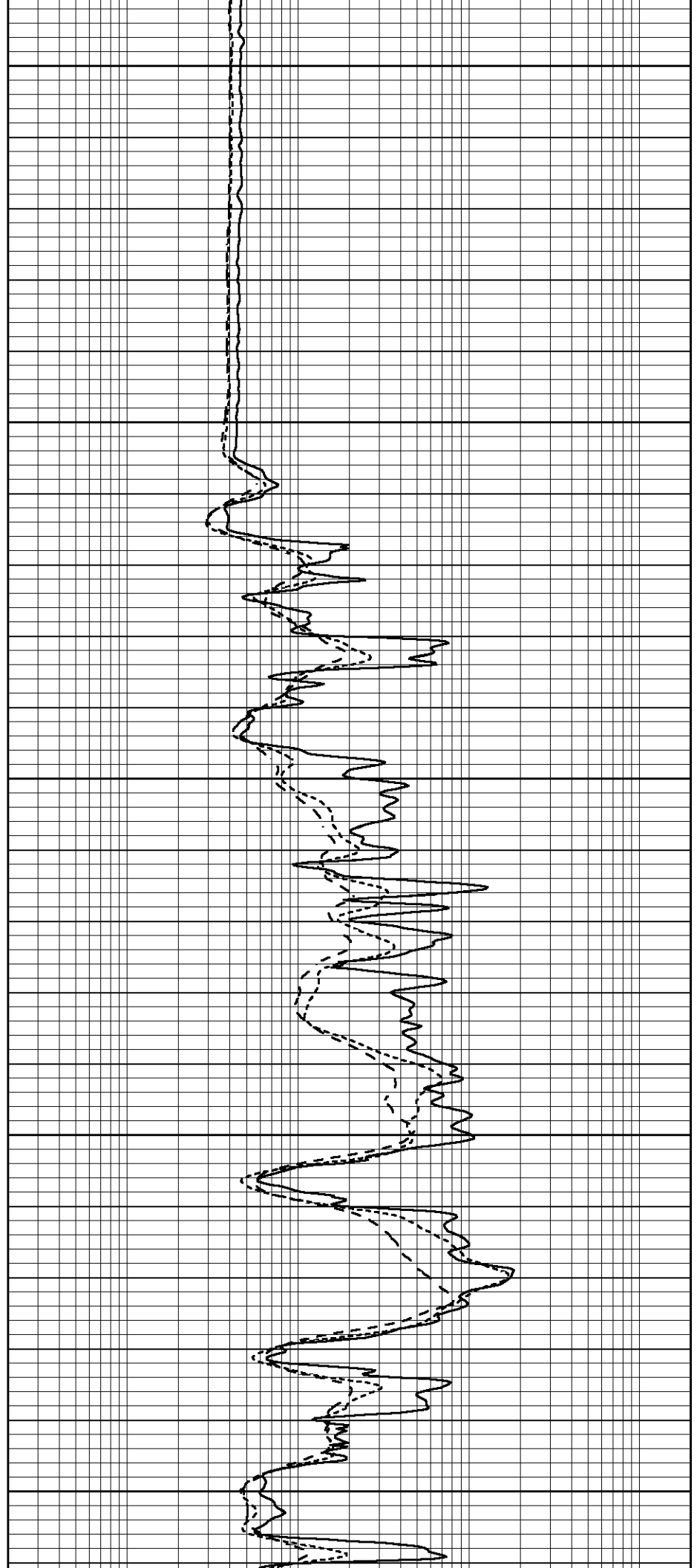
1800

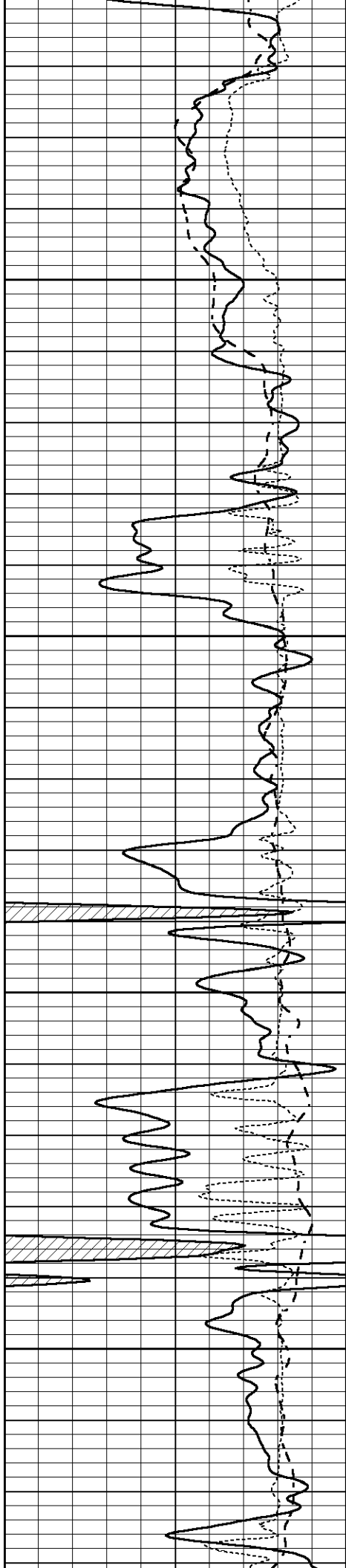
1850

1900

1950

2000



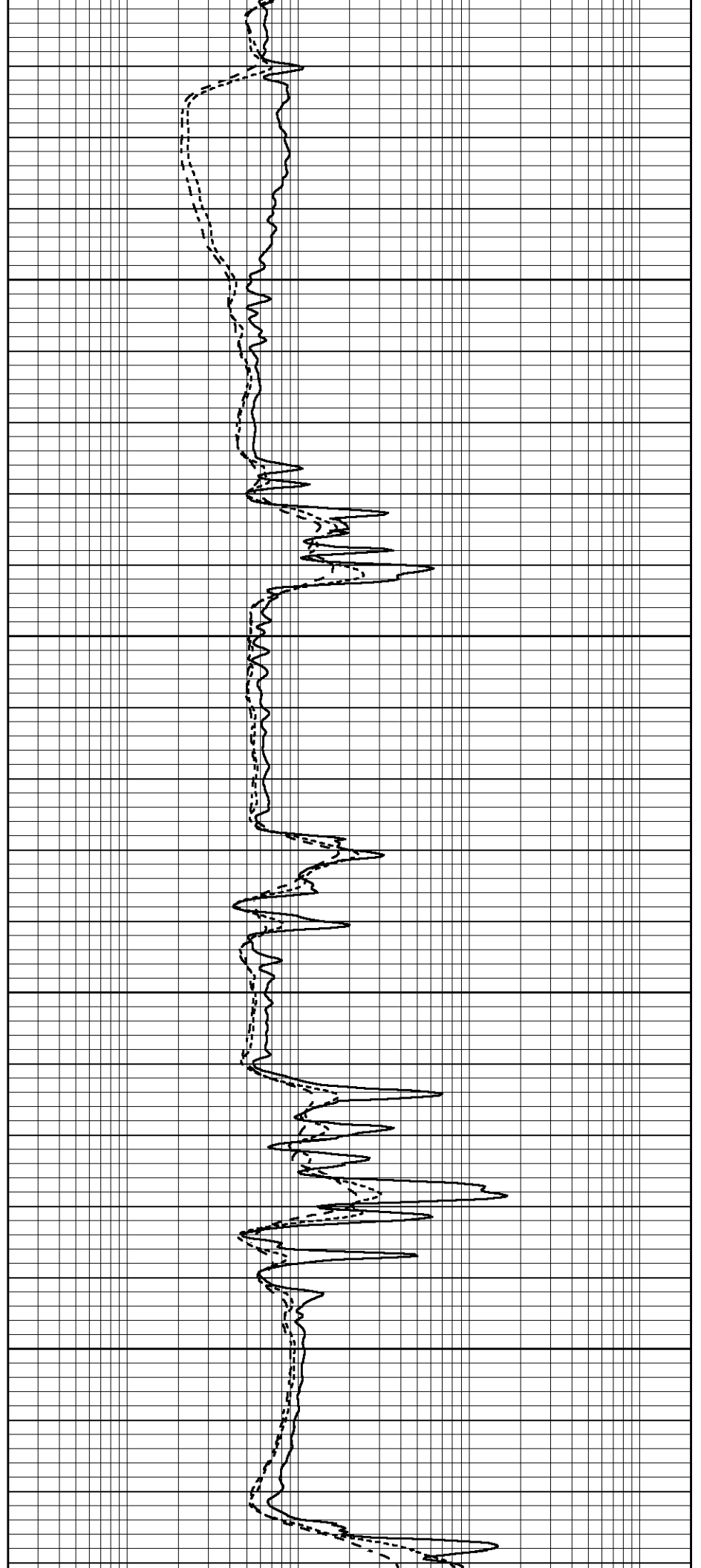


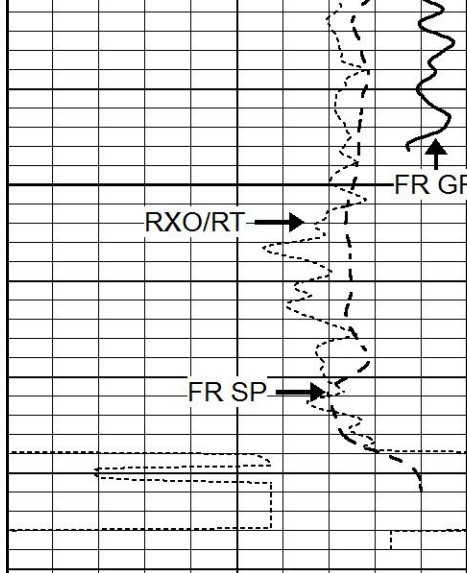
2050

2100

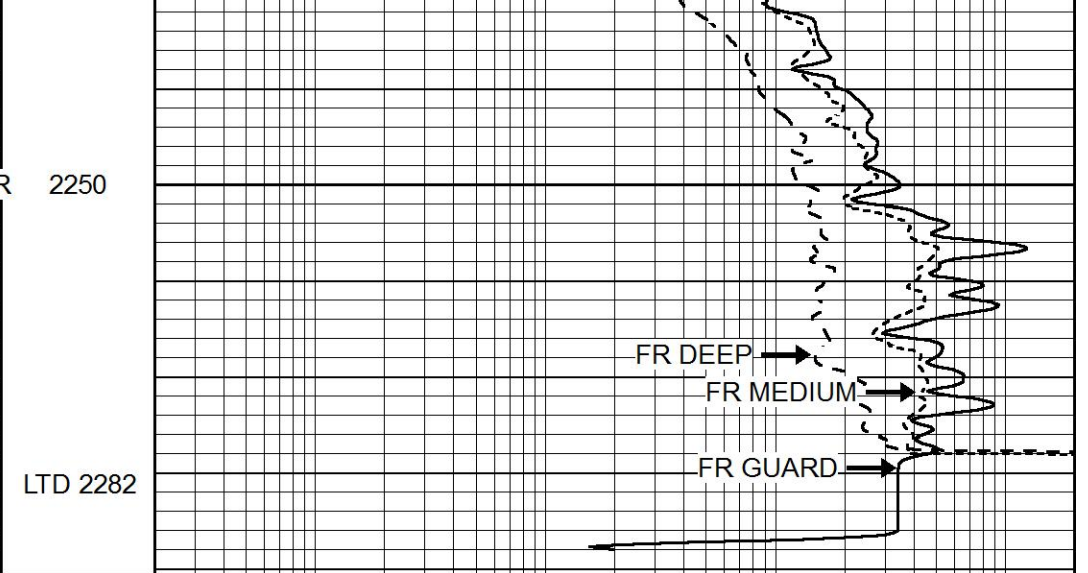
2150

2200





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50



0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

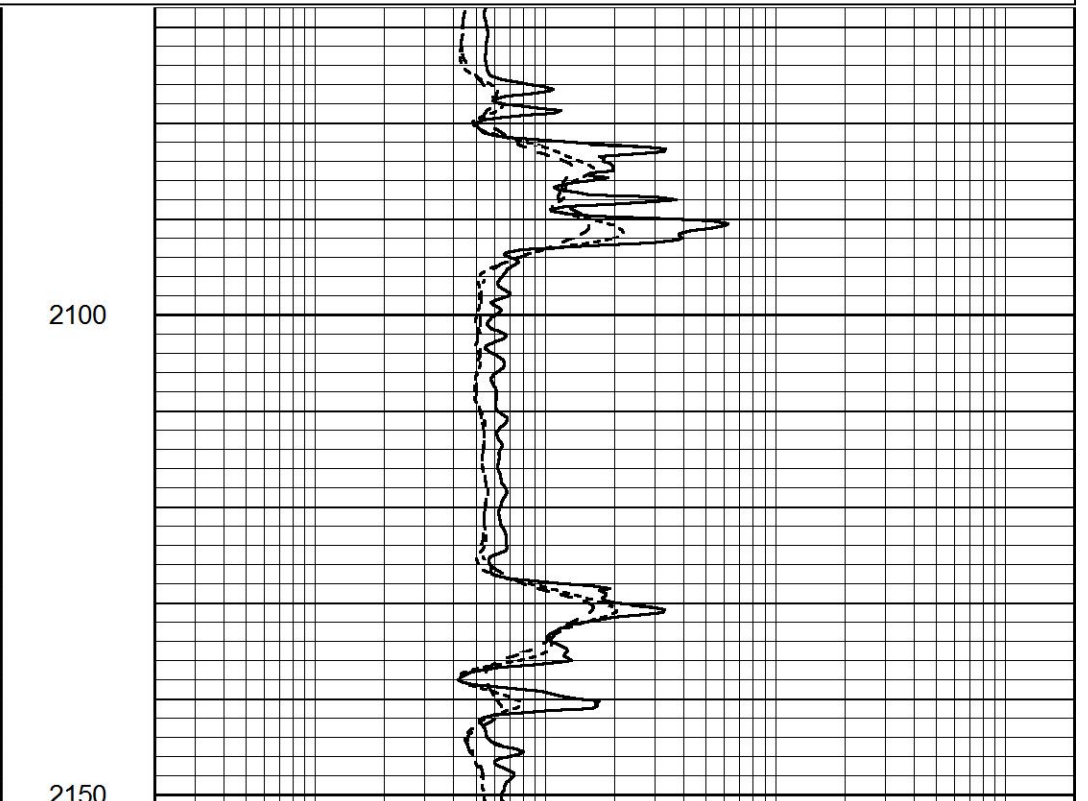
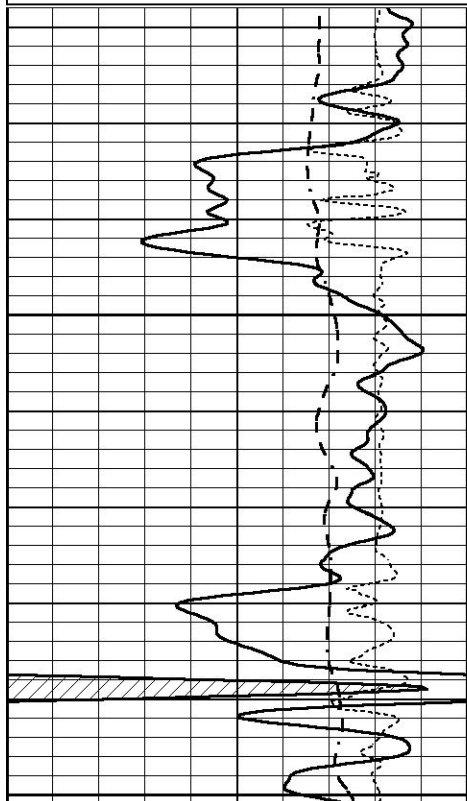


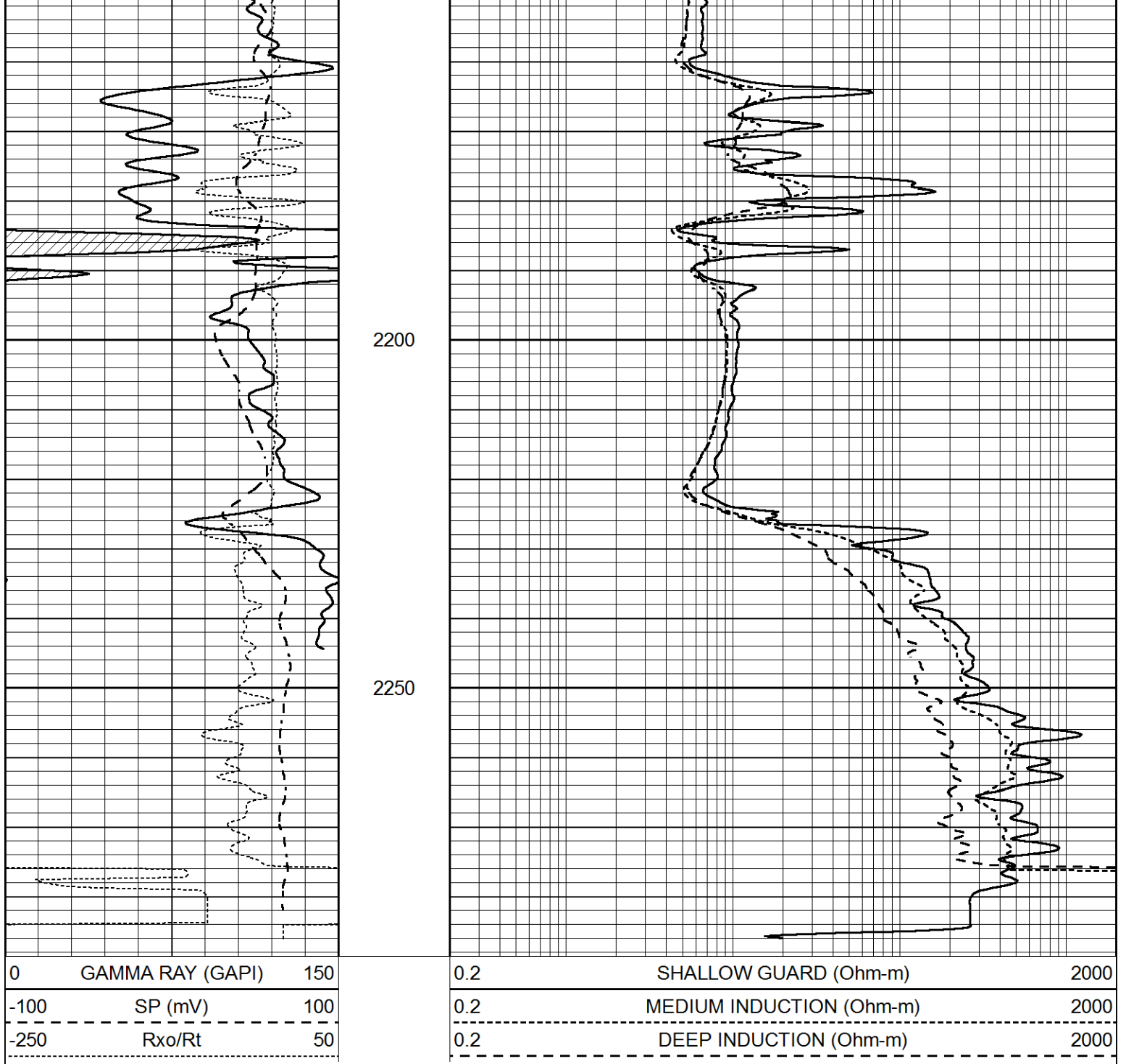
REPEAT SECTION

Database File 7587pe.db
 Dataset Pathname pass3DR
 Presentation Format _dil
 Dataset Creation Sat May 20 08:05:39 2023
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000





Calibration Report

Database File 7587pe.db
 Dataset Pathname pass5DIL
 Dataset Creation Sat May 20 07:56:44 2023

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Sun Apr 02 09:22:50 2023
 Downhole Cal Performed: Tue Feb 19 11:44:24 2019
 After Survey Verification Performed: Tue Feb 19 11:44:27 2019

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	550.000	-3.000
Medium	0.000	0.731	V	1.000	464.000	mmho/m	515.000	12.000

Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.649	V	0.000	404.000	mmho/m	623.784	-4.595
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Litho Density Calibration Report
Serial: 002 Model: PRB

Master Calibration					Performed Thu Apr 06 13:30:36 2013			
	Background	Magnesium	Aluminum	Aluminum+Fe				
Window 1	729.7	6743.5	2011.4	1795.3				cps
Window 2	674.1	5757.9	1756.3	1602.7				cps
Window 3	540.0	2871.7	1028.2	982.7				cps
Window 4	160.6	165.6	162.6	161.5				cps
Long Space	0.0	5083.7	1082.2	928.6				cps
Short Space	1.3	1183.0	789.7	665.4				cps
Rho		1.7100	2.5900	0.0000				g/cc
Pe		2.0000	2.7500	5.7900				
Rib Angle	: 45.4	Rib Slope	: 1.013	Density/Spine Ratio			: 0.550	
Spine Angle	: 75.4	Spine Slope	: 3.828	Spine Intercept			: -18.6	

Before Survey Verification					Performed Wed Dec 31 18:00:00 1969			
	Background	Magnesium	Aluminum	Aluminum+Fe				
Window 1	0.0	0.0	0.0	0.0				cps
Window 2	0.0	0.0	0.0	0.0				cps
Window 3	0.0	0.0	0.0	0.0				cps
Window 4	0.0	0.0	0.0	0.0				cps
Long Space	0.0	0.0	0.0	0.0				cps
Short Space	0.0	0.0	0.0	0.0				cps
Measured Rho		0.0000	0.0000	0.0000				g/cc
Measured Correction		0.0000	0.0000	0.0000				g/cc
Measured Pe			0.0000	0.0000				

After Survey Verification					Performed Wed Dec 31 18:00:00 1969			
	Background	Magnesium	Aluminum	Aluminum+Fe				
Window 1	0.0	0.0	0.0	0.0				cps

Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 080621PMC
Tool Model: NABORS

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 46001
Tool Model: Probe1
Performed: Thu Apr 20 09:55:57 2023

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.4300 GAPI/cps